



National Highway Traffic Safety Administration

Petition for Exemption from the Federal Motor Vehicle Theft Prevention Standard; Ford Motor Company

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Grant of petition for exemption.

SUMMARY: This document grants in full the Ford Motor Company (Ford) petition for exemption from the Federal Motor Vehicle Theft Prevention Standard (theft prevention standard) for its Mustang Mach-E vehicle line beginning in model year (MY) 2024. The petition is granted because the agency has determined that the antitheft device to be placed on the line as standard equipment is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the theft prevention standard. Ford also requested confidential treatment for specific information in its petition. Therefore, no confidential information provided for purposes of this notice has been disclosed.

DATES: The exemption granted by this notice is effective beginning with the 2024 model year.

FOR FURTHER INFORMATION CONTACT: Carlita Ballard, Office of International Policy, Fuel Economy, and Consumer Programs, NHTSA, West Building, W43-439, NRM-310, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590. Ms. Ballard's phone number is (202) 366-5222. Her fax number is (202) 493-2990.

SUPPLEMENTARY INFORMATION:

Under 49 U.S.C. chapter 331, the Secretary of Transportation (and the National Highway Traffic Safety Administration (NHTSA) by delegation) is required to promulgate a theft prevention standard to provide for the identification of certain motor vehicles and their major replacement parts to impede motor vehicle theft. NHTSA promulgated regulations at 49 CFR part 541 (theft prevention standard) to require parts-marking for specified passenger motor

vehicles and light trucks. Pursuant to 49 U.S.C. 33106, manufacturers that are subject to the parts-marking requirements may petition the Secretary of Transportation for an exemption for a line of passenger motor vehicles equipped with an antitheft device as standard equipment that the Secretary decides is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements. In accordance with this statute, NHTSA promulgated 49 CFR part 543, which establishes the process through which manufacturers may seek an exemption from the theft prevention standard.

49 CFR 543.5 provides general submission requirements for petitions and states that each manufacturer may petition NHTSA for an exemption of one vehicle line per model year. Among other requirements, manufacturers must identify whether the exemption is sought under section 543.6 or section 543.7. Under section 543.6, a manufacturer may request an exemption by providing specific information about the antitheft device, its capabilities, and the reasons the petitioner believes the device to be as effective at reducing and deterring theft as compliance with the parts-marking requirements. Section 543.7 permits a manufacturer to request an exemption under a more streamlined process if the vehicle line is equipped with an antitheft device (an “immobilizer”) as standard equipment that complies with one of the standards specified in that section.¹

Section 543.8 establishes requirements for processing petitions for exemption from the theft prevention standard. As stated in section 543.8(a), NHTSA processes any complete

¹ 49 CFR 543.7 specifies that the manufacturer must include a statement that their entire vehicle line is equipped with an immobilizer that meets one of the following standards:

- (1) The performance criteria (subsection 8 through 21) of C.R.C, c. 1038.114, Theft Protection and Rollaway Prevention (in effect March 30, 2011), as excerpted in appendix A of [part 543];
- (2) National Standard of Canada CAN/ULC-S338-98, Automobile Theft Deterrent Equipment and Systems: Electronic Immobilization (May 1998);
- (3) United Nations Economic Commission for Europe (UN/ECE) Regulation No. 97 (ECE R97), Uniform Provisions Concerning Approval of Vehicle Alarm System (VAS) and Motor Vehicles with Regard to Their Alarm System (AS) in effect August 8, 2007; or
- (4) UN/ECE Regulation No. 116 (ECE R116), Uniform Technical Prescriptions Concerning the Protection of Motor Vehicles Against Unauthorized Use in effect on February 10, 2009.

exemption petition. If NHTSA receives an incomplete petition, NHTSA will notify the petitioner of the deficiencies. Once NHTSA receives a complete petition the agency will process it and, in accordance with section 543.8(b), will grant the petition if it determines that, based upon substantial evidence, the standard equipment antitheft device is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of part 541.

Section 543.8(c) requires NHTSA to issue its decision either to grant or to deny an exemption petition not later than 120 days after the date on which a complete petition is filed. If NHTSA does not make a decision within the 120-day period, the petition shall be deemed to be approved and the manufacturer shall be exempt from the standard for the line covered by the petition for the subsequent model year.² Exemptions granted under part 543 apply only to the vehicle line or lines that are subject to the grant and that are equipped with the antitheft device on which the line's exemption was based, and are effective for the model year beginning after the model year in which NHTSA issues the notice of exemption, unless the notice of exemption specifies a later year.

Sections 543.8(f) and (g) apply to the manner in which NHTSA's decisions on petitions are to be made known. Under section 543.8(f), if the petition is sought under section 543.6, NHTSA publishes a notice of its decision to grant or deny the exemption petition in the *Federal Register* and notifies the petitioner in writing. Under section 543.8(g), if the petition is sought under section 543.7, NHTSA notifies the petitioner in writing of the agency's decision to grant or deny the exemption petition.

This grant of petition for exemption considers Ford Motor Corporation's (Ford) petition for its Mustang Mach-E vehicle line beginning in MY 2024.

I. Specific Petition Content Requirements under 49 CFR 543.6

² 49 U.S.C. 33106(d).

Pursuant to 49 CFR part 543, Exemption from Vehicle Theft Prevention, Ford petitioned for an exemption for its specified vehicle line from the parts-marking requirements of the theft prevention standard, beginning in MY 2024. Ford petitioned under 49 CFR 543.6, Petition: Specific content requirements, which, as described above, requires manufacturers to provide specific information about the antitheft device installed as standard equipment on all vehicles in the line for which an exemption is sought, the antitheft device's capabilities, and the reasons the petitioner believes the device to be as effective at reducing and deterring theft as compliance with the parts-marking requirements.

More specifically, section 543.6(a)(1) requires petitions to include a statement that an antitheft device will be installed as standard equipment on all vehicles in the line for which the exemption is sought. Under section 543.6(a)(2), each petition must list each component in the antitheft system, and include a diagram showing the location of each of those components within the vehicle. As required by section 543.6(a)(3), each petition must include an explanation of the means and process by which the device is activated and functions, including any aspect of the device designed to: (1) facilitate or encourage its activation by motorists; (2) attract attention to the efforts of an unauthorized person to enter or move a vehicle by means other than a key; (3) prevent defeating or circumventing the device by an unauthorized person attempting to enter a vehicle by means other than a key; (4) prevent the operation of a vehicle which an unauthorized person has entered using means other than a key; and (5) ensure the reliability and durability of the device.³

In addition to providing information about the antitheft device and its functionality, petitioners must also submit the reasons for their belief that the antitheft device will be effective in reducing and deterring motor vehicle theft, including any theft data and other data that are available to the petitioner and form a basis for that belief,⁴ and the reasons for their belief that the

³ 49 CFR 543.6(a)(3).

⁴ 49 CFR 543.6(a)(4).

agency should determine that the antitheft device is likely to be as effective as compliance with the parts-marking requirements of part 541 in reducing and deterring motor vehicle theft. In support of this belief, the petitioners should include any statistical data that are available to the petitioner and form the basis for the petitioner's belief that a line of passenger motor vehicles equipped with the antitheft device is likely to have a theft rate equal to or less than that of passenger motor vehicles of the same, or a similar, line which have parts marked in compliance with part 541.⁵

The following sections describe Ford's petition information provided pursuant to 49 CFR part 543, Exemption from Vehicle Theft Prevention. To the extent that specific information in Ford's petition is subject to a properly filed confidentiality request, that information was not disclosed as part of this notice.⁶

II. Ford's Petition for Exemption

In a petition originally submitted on July 11, 2022 and re-submitted on September 14, 2022, Ford requested an exemption from the parts-marking requirements of the theft prevention standard for its Mustang Mach-E vehicle line beginning with MY 2024.

In its petition, Ford provided a detailed description and diagram of the identity, design, and location of the components of the antitheft device for the Mustang Mach-E vehicle line. Ford stated that its MY 2024 Mustang Mach-E vehicle line will be installed with a passive, transponder based, electronic engine immobilizer antitheft device as standard equipment. Ford also stated that its Mustang Mach-E vehicle line will offer a phone as a key (PaaK) feature as standard equipment. Specifically, Ford stated that its vehicle line will be installed with the Intelligent Access with Push Button Start (IAwPB). Key components of the IAwPB device will include a key fob, radio transceiver module, engine start/stop button, body control module (BCM), primary drive control module (PDCM) (battery electric vehicle (BEV) equivalent of the

⁵ 49 CFR 543.6(a)(5).

⁶ 49 CFR 512.20(a).

powertrain control module (PCM), secondary drive control module (SDCM), Bluetooth low energy module (BLEM) and an embedded secure modem (for PaaK feature). Ford also stated that its vehicle line will be equipped with a hood release, counterfeit resistant VIN label, secondary VINs inscribed on the body and a cabin accessible with a valid keycode as standard antitheft features.

Ford further stated that its Mustang Mach-E vehicle line will also be offered with a perimeter alarm system⁷ as optional equipment which will activate a visible and audible alarm whenever unauthorized access is attempted. Some additional features of the antitheft device include: encrypted communication between the transponder, BCM control function and the PCM; “virtually impossible” key duplication; and shared security data between the body control module/remote function actuator and the powertrain control module. NHTSA has previously approved the IAWPB antitheft system as standard equipment for the Ford Bronco Sport vehicle line. The IAWPB system is described in the grant of petition for exemption published in the *Federal Register* on August 12, 2020.

Pursuant to section 543.6(a)(3), Ford explained that there is no manual activation of its antitheft system and that it is activated/armed when the “StartStop” button is pressed, shutting off the engine. Ford stated that the device is deactivated when a start sequence is completed and engine start is successful. Ford further stated that the vehicle engine can only be started when the key is present in the vehicle and the “StartStop” button inside the vehicle is pressed. Ford stated that when the “StartStop” button is pressed, the transceiver module will read a key code and transmit an encrypted message to the control module to determine key validity and engine

⁷ Ford also stated that it will offer an audible and visible perimeter alarm as optional equipment on its Mustang Mach-E line. Per 49 U.S.C. 33106 (b), manufacturers may petition NHTSA for an exemption “for a line of passenger motor vehicles equipped *as standard equipment* with an antitheft device that [NHTSA] decides is likely to be as effective in reducing and deterring motor vehicle theft as compliance with” the Theft Prevention Standard (emphasis added). Per 49 U.S.C. 33106(a)(2), “standard equipment” means equipment already installed in a motor vehicle when it is delivered from the manufacturer and not an accessory or other item that the first purchaser customarily has the option to have installed. Therefore, for purposes of Ford’s petition, NHTSA is only considering the device equipped on the vehicle as standard equipment.

start by sending a separate encrypted message to the BCM, the BLEM, the SDCM, then the PDCM equivalent of the PCM. The powertrain will function only if the key code matches the unique identification key code previously programmed into the BCM. Ford stated that there are three modules that must be matched together in order for the vehicle to start. If the codes do not match, the electric drive inverter for each drive motor is disabled preventing currents reaching the motor which then prevents torque from being produced at the wheels. Ford further stated that any attempt to operate the vehicle without transmission of the correct code to the electronic control (i.e., short circuiting the “StartStop” button) module will be ineffective.

As required in section 543.6(a)(3)(v), Ford provided information on the reliability and durability of its proposed device. To ensure reliability and durability of the device, Ford stated that it conducted tests on the antitheft device which complied with its own specific standards. Additionally, Ford stated that its antitheft device has no moving parts (i.e., BCM, BLEM, SDCM and the PCM, and electrical components) to perform system functions, which eliminate the possibility of physical damage or deterioration from normal use; and mechanically overriding the device to start the vehicle is also impossible. In further addressing the reliability and durability of its device, Ford stated that its Mustang Mach-E vehicle line will also be equipped with several other standard antitheft features common to Ford vehicles, (i.e., hood release located inside the vehicle, counterfeit resistant VIN labels, secondary VINs, and cabin accessibility only with the use of a valid key fob).

Ford stated that the antitheft system installed in its 2024 MY Ford Mustang Mach-E vehicles is similar to the system that was offered in the 2021 MY Ford Bronco Sport vehicles equipped with the IAwPB. The Ford Bronco Sport vehicle line was granted a parts-marking exemption by NHTSA (85 FR 48759, August 12, 2020) beginning with its MY 2021 vehicles.

Ford believes that the Ford Mustang Mach-E would have a similar theft rate to the Ford Edge. Ford specifically stated that the Ford Edge vehicle line is comparable with the Ford Mustang Mach-E in vehicle segment, size and equipment and since the IAwPB system is the

primary theft deterrent on Ford vehicles, Ford believes that the Ford Mustang Mach-E will likely have a very low theft rate based on the comparable Ford Edge average theft rate of approximately 2.9/1000. Ford also stated that its Ford Mustang with the antitheft system showed a 70% reduction in theft rate compared to the MY 1995 Ford Mustang, according to the National Insurance Crime Bureau (NICB) theft statistics.

III. Decision to Grant the Petition

Pursuant to 49 U.S.C. 33106 and 49 CFR 543.8(b), the agency grants a petition for exemption from the parts-marking requirements of part 541, either in whole or in part, if it determines that, based upon substantial evidence, the standard equipment antitheft device is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of part 541. The agency finds that Ford has provided adequate reasons for its belief that the antitheft device for its vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the theft prevention standard. This conclusion is based on the information Ford provided about its antitheft device. NHTSA believes, based on Ford's supporting evidence, that the antitheft device described for its vehicle line is likely to be as effective in reducing and deterring motor vehicle theft as compliance with the parts-marking requirements of the theft prevention standard.

The agency concludes that Ford's antitheft device will provide four types of performance features listed in section 543.6(a)(3): promoting activation; preventing defeat or circumvention of the device by unauthorized persons; preventing operation of the vehicle by unauthorized entrants; and ensuring the reliability and durability of the device.

The agency notes that 49 CFR part 541, Appendix A-1, identifies those lines that are exempted from the theft prevention standard for a given model year. 49 CFR 543.8(f) contains publication requirements incident to the disposition of all part 543 petitions. Advanced listing, including the release of future product nameplates, the beginning model year for which the petition is granted and a general description of the antitheft device is necessary in order to notify

law enforcement agencies of new vehicle lines exempted from the parts-marking requirements of the theft prevention standard.

If Ford decides not to use the exemption for its requested vehicle line, the manufacturer must formally notify the agency. If such a decision is made, the line must be fully marked as required by 49 CFR 541.5 and 541.6 (marking of major component parts and replacement parts).

NHTSA notes that if Ford wishes in the future to modify the device on which this exemption is based, the company may have to submit a petition to modify the exemption. Section 543.8(d) states that a part 543 exemption applies only to vehicles that belong to a line exempted under this part and equipped with the antitheft device on which the line's exemption is based. Further, section 543.10(c)(2) provides for the submission of petitions "to modify an exemption to permit the use of an antitheft device similar to but differing from the one specified in the exemption."

The agency wishes to minimize the administrative burden that section 543.10(c)(2) could place on exempted vehicle manufacturers and itself. The agency did not intend in drafting part 543 to require the submission of a modification petition for every change to the components or design of an antitheft device. The significance of many such changes could be de minimis. Therefore, NHTSA suggests that if Ford contemplates making any changes, the effects of which might be characterized as de minimis, it should consult the agency before preparing and submitting a petition to modify.

For the foregoing reasons, the agency hereby grants in full Ford's petition for exemption for the Mustang Mach-E vehicle line from the parts-marking requirements of 49 CFR part 541, beginning with its MY 2024 vehicles.

Issued under authority delegated in 49 CFR 1.95 and 501.8.

Raymond R. Posten,

Associate Administrator for Rulemaking.

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